AN OPTICAL DEVICE THAT MEASURES DISTANCE BETWEEN THE DEVICE AND A SURFACE

ABSTRACT OF THE INVENTION

An optical device and methods thereof are described. The device includes a first light source adapted to emit light onto a surface, and a detector adapted to receive light reflected from the surface. The reflected light produces a speckle pattern. The distance between the optical device and the surface can be measured using a quantifiable attribute associated with the speckle pattern.